

Amendments to the Claims

Please amend the claims as shown below.

1. (Canceled).
2. (Canceled).
3. (Canceled).
4. (Canceled).
5. (Currently Amended) A method of performing budgetary consistency checks between a hierarchical working budget database in a first data storage area and a hierarchical reference budget database in a second data storage area in a computer system, comprising:
 - iteratively receiving a budget item, at the computer system, for entry into the working budget database, wherein the budget item is represented by a value;

executing, by a rules manager, one or more rules related to the budget item stored in a rules array data structure, the rules including a working budget address field containing pointers to entries at the node and sub-node levels within the hierarchical working budget database in the first data storage area, and a reference budget address field containing a pointer to entries at a node level within the hierarchical reference budget database in the second data storage area, a test field containing a definition of a test relationship between the entries pointed to in the hierarchical working budget database and the entries entry pointed to in the hierarchical reference budget database, and a field containing a definition of a response that is a function of the test relationship, the executing comprising:

retrieving data related to the budget item from the entries in the working budget database pointed to by the pointers in the working budget address field;
retrieving data from the entry in the reference budget database pointed to by the pointers in the reference budget address field;
applying the test relationship to the retrieved data;

determining the result of the test relationship between the entry data related to the budget item from the working budget database in the first storage area and the entry

data related to the budget item from the entry from the reference budget database pointed to in the rule, and outputting a response defined by the response definition; if any rule generates an error response according to the response definition, blocking the budget item from being saved to the working budget database; and otherwise, saving the received budget item in the working budget database.

6. (Currently Amended) This method of claim 5, further comprising, pursuant to execution of a rule, performing aggregation of addressed entries from sub-nodes of the hierarchical working database according to a definition provided in the rule, an aggregate value obtained therefrom being used to determine if the test relationship is satisfied.
7. (Original) The method of claim 5, further comprising pursuant to execution of a rule, performing aggregation of addressed entries of the reference database, according to a definition provided in the rule, an aggregate value obtained therefrom being used to determine if the test relationship is satisfied.
8. (Original) The method of claim 5, further comprising, if any rule generates a warning, posting an alert as specified in the response definition of the corresponding rule.
9. (Original) The method of claim 5, further comprising:
 - identifying elements within the working budget database that are to be changed by the new budget item, and
 - identifying rules for which the identified elements are operands,
wherein the executing causes only the identified rules to be executed.
10. (Canceled).
11. (Canceled).
12. (Canceled).
13. (Canceled).
14. (Canceled).

15. (Currently Amended) A computer readable medium in which are stored program instructions that when executed, cause a financial management system to:

receive, at the financial management system comprising a hierarchical working budget database in a first data storage area and a hierarchical reference budget database in a second data storage area, a budget item for entry into the working budget database, wherein the budget item is represented by a value;

execute, by a rules manager, one or more rules related to the budget item stored in a rules array data structure stored separately from the working budget database and the reference budget database, the rules including a working budget address field containing pointers to node level and sub-node level entries within the hierarchy of the working budget database and a reference budget address field containing pointers to entries at a node level within the hierarchy of the reference budget database, a test definition field containing a definition of a test relationship between the entries in the working budget and the entries in the reference budget and a response field containing a definition of a response that is a function of the test relationship, the executing comprising:

retrieving data values related to the budget item from the entries in the working budget database pointed to by the pointers in the working budget address field;

retrieving data values from the entry in the reference budget database pointed to by the pointers in the reference budget address field;

applying the test relationship to the retrieved data;

determining the output of the test relationship by comparing the data value of the budget item pointed to in the working budget database in the first storage area and the data value of the entry pointed to in the reference budget data, and outputting a response according to the response definition;

if any rule generates an error response according to the response definition, block the budget item from the working budget database; and

otherwise, update the working budget database with received budget item.

16. (Previously Presented) The computer readable medium of claim 15, wherein the program instructions further cause the financial management system, if any rule generates a warning, to post an alert as specified in the response definition of the corresponding rule.

17. (Previously Presented) The computer readable medium of claim 15, wherein the program instructions further cause the financial management system to:

identify elements within the working budget database that are to be changed by the new budget item, and
identify rules for which the identified elements are operands, and
execute only the identified rules.

18. (Currently Amended) The method of claim 5, wherein the executing comprises:

~~identifying, by using an address field containing address pointers, locations from a first and second budget database from which budget value information is to be obtained,~~
storing in a test field a definition of a relationship that must be met between data_values from the first data structure and data_values from the second data structure to satisfy the rule, and
storing in a response field a definition of an action to occur if the relationship is not satisfied.

19. (Currently Amended) The method of claim 18, the identifying comprises:

addressing nodes including sub-nodes of the first budget database using a first address pointer, and
addressing nodes of the reference budget database using a second address pointer.

20. (Currently Amended) The method of claim 18, the identifying comprises:

referencing nodes including sub-nodes of both the first and second budget database using separate address pointers contained in the address field.

21. (Currently Amended) The method of claim 18, the executing comprises:

entering an indication, contained in at least one rule, recursively across a plurality of sets of locations of the first and second budget database, and the working budget address field identifies the sets of locations.

22. (Currently Amended) The method of claim 18, the executing comprises:

accessing a test field for definition of an aggregation rule contained in at least one rule to the locations specified in the respective address field.

23. (Currently Amended) A financial management system, comprising:
- a working budget hierarchical database storage device storing a working budget database having an amendable budget items, wherein the budget items are represented by a value;
 - a reference budget hierarchical database storage device, separate from the working budget database storage device, storing reference budget database having reference budget items in a hierarchy, the reference budget items having a value and corresponding to the budget items of the working budget stored in the working budget database;
 - a terminal for receiving a budget item for entry into the working budget database;
 - a rules array data structure, separate from the working budget hierarchical database and the reference budget hierarchical database, storing a plurality of rules including rules related to the budget item, the rules including a working budget address field containing pointers to entries within different levels of the hierarchy of the working budget hierarchical database and a reference budget address field containing pointers to reference budget items within different levels of the hierarchy of the reference budget hierarchical database, a test field containing a definition of a test relationship that between the entries in the working budget and the entries in the reference budget and a response field containing a definition of a response that is a function of the test relationship;
 - a processor executing one or more of the plurality of rules stored in the rules array, the processor configured to:
 - retrieve values of the budget item from the entries in the working budget database pointed to by the pointers in the working budget address field;
 - retrieving values from the entry in the reference budget database pointed to by the pointers in the reference budget address field;
 - applying the test relationship to the retrieved data; and
 - a display connected to the terminal and the processor for indicating that the received budget item is blocked from being saved to the working budget database if any rule generates an error response according to a response definition in the executed rule.

24. (Currently Amended) The system of claim 23, wherein the hierarchy of the reference budget hierarchical database comprises a plurality of nodes at different levels in the hierarchy, and, in at least one of the rules, the reference budget address field contains a pointer~~pointers to the entry in the reference budget database~~ pointing to all of the nodes in at least one of the different levels of the reference budget database, and a single rule applies to all entries at that level.

25. (Currently Amended) The method of claim 5, wherein the hierarchy of the reference budget hierarchical database comprises a plurality of nodes at different levels in the hierarchy, and, in at least one of the rules, the reference budget address field contains a pointer~~pointers to the entry in the reference budget database~~ pointing to all of the nodes in at least one of the different levels, and a single rule applies to all entries at that level.

26. (Currently Amended) The computer readable medium of claim 15, wherein the hierarchy of the reference budget hierarchical database comprises a plurality of nodes at different levels in the hierarchy, and, in at least one of the rules, the reference budget address field contains pointers~~pointing a pointer to the entry in the reference budget database~~ points to all of the nodes in at least one of the different levels, and a single rule applies to all entries at that level.

27. (Currently Amended) The system of claim 23, wherein the pointers to the entries in the working budget database are used to retrieve working budget values are also applied~~used~~ to ~~the reference budget database~~ to retrieve reference budget values from the reference budget database for application of a rule.

28. (Currently Amended) The method of claim 5, wherein the pointers to the entries in the working budget database are used to retrieve working budget values are also applied~~used~~ to ~~the reference budget database~~ to retrieve reference budget values from the reference budget database for application of a rule.

29. (Currently Amended) The computer readable medium of claim 15, wherein the pointers to the entries in the working budget database to retrieve working budget values are also

Serial No.: 10/669,369

Response to Office Action mailed April 14, 2009

applied used to the reference budget database to retrieve reference budget values from the reference budget database for application of a rule.